

# INSTRUMENT VALVES

FOR THE PROCESS AND GAS INDUSTRIES

ISO 9001:2008 Certified Quality System

Needle Valves

Gauge Valves

Bleeder Valves

Multi-Port Valves

Root Valves

Miniature Valves

Monoflange Valves



Patented Pressure-Core®  
Stem Seal with 5 Year Warranty

Exceeds EPA Method 21  
Testing for VOC Emissions

Carbide Ball Seats

Soft "Roddable" Seat Styles

Carbon Steel and  
316 SS Standard Materials

Standard 316 SS meets  
NACE MR0175/ISO 15156-3

Specialty Alloys Available



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## Warranty, Sales Policy, Special Orders and Manufacturing Standards & Compliances

### PRODUCT WARRANTY

Parker warrants its products to be free from defects in material and/or workmanship for a period of one year from date of shipment. This guarantee is valid only if such products have been used in normal applications consistent with our recommendations. Our liability is limited to repair or replacement and no responsibility is assumed for consequential damage or expense. Any controversy arising out of the sale of Parker products shall be determined in accordance with laws of the State of Texas.

Parker reserves the right to change materials, specifications or designs without notice. Parker will not be obligated to install or furnish such changes on products previously or subsequently sold.

### PTFE PRESSURE-CORE® STEM SEAL WARRANTY

After years of field experience and millions of valves in service, Parker takes great pride in extending a five year limited warranty on our patented PTFE Pressure-Core® Stem Seal System. The warranty period starts at date of purchase and extends for five full years. If within this period the Pressure-Core® Stem Seal develops a leak, Parker will provide a new bonnet and stem assembly at no cost.

Parker will assume no consequential damages or liabilities connected with this warranty. The warranty is void if the valves have not been used in accordance with the stamped pressure / temperature ratings or if the bonnet assembly has been disassembled. The PTFE Pressure-Core® Stem Seal is factory assembled and cannot be disassembled or inspected without damaging the seal.

### SALES POLICY

Our products are sold through authorized manufacturer representatives or direct from our factory sales office. All orders are subject to acceptance by Parker, headquarters located in Houston, Texas (U.S.A.). Prices are subject to change without notice and any errors in published prices are subject to correction. No materials may be returned for credit without written authorization from our Houston office. In issuing credit for returned material, we reserve the right to direct deduct a reconditioning and handling charge. Special items, not conforming to our standard line, will not be accepted for credit.

### SPECIAL ORDERS

Parker has been a custom manufacturer of valve components since 1941. Parker invites inquiries for special variations on our line of valves and will work with you to solve your specific application problems.

### OXYGEN & CHLORINE SERVICE

To insure the quality, safety and cleanliness levels of our products, Parker has a verifiable, environmentally controlled system of precision cleaning for Oxygen and Chlorine Service.

- Parts are cleaned with an approved liquid cleaner in an ultrasonic vibrator.
- Inspection of parts is done with an Ultraviolet light to detect contaminants such as hydrocarbons and minute particles that are not visible to the naked eye.
- Each part is tagged and heat-sealed in a double bag to prevent contamination in transit.
- Upon completion of cleaning process, Carbon Steel Valves discolor to a silver-greenish sheen. This does not affect manifold performance in any way.

### MANUFACTURING STANDARDS & COMPLIANCES

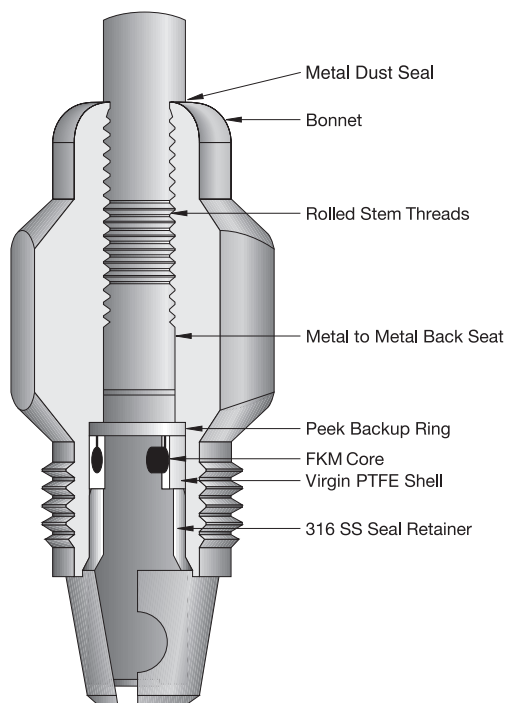
Parker products are manufactured, conform and are certified by the following agencies and associations as required:

- ISO 9001:2008 Certified Quality System
- Canadian Registration Number (CRN)
- CE – Pressure Equipment Directive Conformity
- National Association of Corrosion Engineers (NACE MR0175/ISO 15156-5) and MR0103
- ASME/ANSI B1.20.1 General Pipe Threads
- ASME/ANSI B16.34 Valves Flanged, Threaded
- ASME/ANSI B16.11 Fittings/Socket Weld, etc.
- ASME/ANSI B31.3 Process Piping (except M Fluid Service)
- MSS SP-25 Standard Valve Markings
- MSS SP-82 Valve Pressure Testing Methods
- MSS SP-99 Instrument Valves

# PTFE Pressure-Core® Stem Seal Bonnet and Packing Design

**ORIFICE**  
 .136" .187" .250" .375"

**PATENTED**  
**5**  
 YEAR WARRANTY



## Pressure-Core® Stem Seal

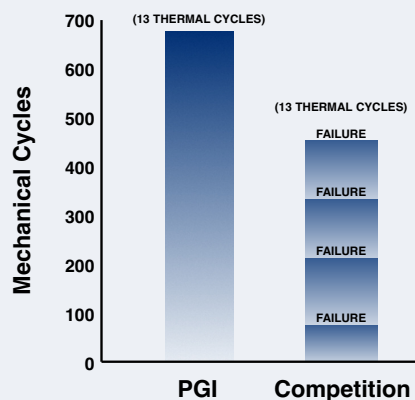
Compared to competitive valve designs, PGI's Pressure-Core® Seal offers leak-free performance with no maintenance requirements. To support this claim, the Pressure-Core® Seal was tested against the competitor's design. The tests simulated harsh plant operating environments and were performed by an independent laboratory in accordance with EPA Method 21.

## How We Do It!

The Pressure-Core® Seal consists of an outer PTFE shell with an elliptical shaped FKM O-Ring core. The encapsulated core is "live-loaded" and provides constant outward pressure against the PTFE shell, which flexes under pressure like an O-Ring. The PTFE shell offers the desired chemical resistance without periodic gland tightening as in conventional designs.

The test results indicate that the Pressure-Core® Seal is a reliable, affordable, virtually leak-free valve requiring no costly, time-consuming maintenance. PGI stands behind this claim with a five year warranty, far exceeding the industry standard.

## FUGITIVE EMISSIONS TEST RESULTS



See for yourself how our Pressure-Core® Seal not only outperforms the leading manufacturer's design, but sets a new industry standard.

### TEST PROCEDURE

Valves mechanically cycled 50 times (full open to full close) at 1,000 PSI methane, then heated to 400°F and air cooled to ambient. Procedure repeated until failure.

### FAILURE CRITERIA

100 PPM leak\*

\*Competitor's Emission Seal Warranty

### TEST RESULTS

**PGI:** The Pressure-Core® Seal successfully completed 694 mechanical cycles and 15 thermal cycles. Maximum leakage throughout testing was 40 PPM.

**Competition:** The leading manufacturer's "low emissions" graphite design failed on the 89th mechanical cycle and on average every 125 cycles throughout the testing. Repeated maintenance was required between each failure to readjust the valve packing.

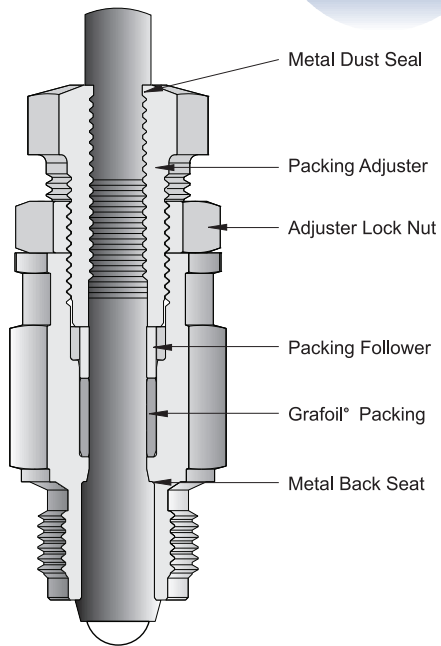
CODE "T" AND "J"

# Low-Torque™ Grafoil® Bonnet and Packing Design

ORIFICE

.187" .375"

TORQUE  
REDUCED  
**50%**

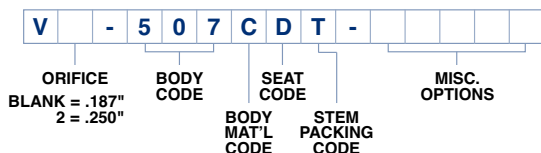


## Grafoil® Stem Seal Torque Reduced 50%

PGI answered customer requests for a lower stem handle turning torque by introducing our new Low-Torque™ Grafoil® bonnet and packing design. It is the nature of Grafoil® packing that it is easily abraded away by the rotation of the valve stem. This abrading requires periodic packing compression adjustment to stop stem seal leaks. We developed a proprietary assembly technique to lower stem torque by 50% which increases ease of operations, and therefore reduces stem abrasion and stem damage from over-torquing. The Low-Torque™ Grafoil® packed stem seal reduces packing adjustments and the associated maintenance costs, while extending the service life of the Grafoil® packing.

# Instrument Hand Valves ~ Soft Seat

**ORIFICE**  
**.187" .250"**

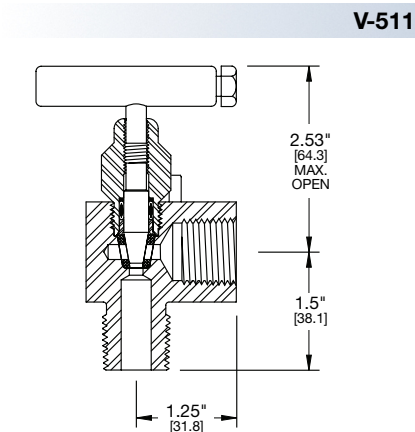
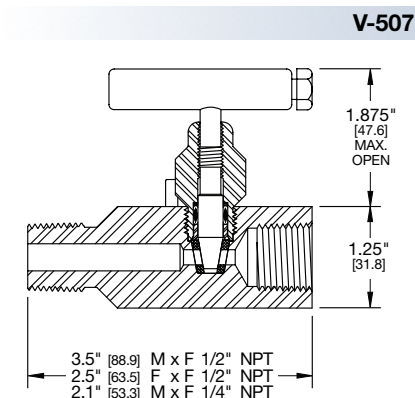


## ORDERING INFORMATION

PART NO.	CONNECTIONS		BODY & BONNET	SEAT & PACKING	
	INLET	OUTLET			
<b>.187" Orifice</b>					
V-501CDT	1/4" MNPT	1/4" FNPT	Carbon Steel	Delrin® Cone Seat	
V-501SDT			316 SS		
V-503CDT	1/4" FNPT	1/4" FNPT	Carbon Steel		
V-503SDT			316 SS		
V-507CDT	1/2" MNPT	1/2" FNPT	Carbon Steel		
V-507SDT			316 SS		
V-509CDT	1/2" FNPT	1/2" FNPT	Carbon Steel	PTFE Pressure-Core® Stem Seal	
V-509SDT			316 SS		
V-511CDT	1/2" MNPT	1/2" FNPT Angle	Carbon Steel		
V-511SDT			316 SS		
V-529CDT	3/4" MNPT	1/2" FNPT	Carbon Steel		
V-529SDT			316 SS		
V-531CDT	1/2" MNPT	1/4" FNPT	Carbon Steel	Max Pressure 6,000 PSI @ 200°F	
V-531SDT			316 SS		
<b>.250" Orifice</b>					
V2-507CDT	1/2" MNPT	1/2" FNPT	Carbon Steel		
V2-507SDT			316 SS		
V2-509CDT	1/2" FNPT	1/2" FNPT	Carbon Steel		
V2-509SDT			316 SS		
V2-529CDT	3/4" MNPT	1/2" FNPT	Carbon Steel		
V2-529SDT			316 SS		
V2-531CDT	1/2" MNPT	1/4" FNPT	Carbon Steel		
V2-531SDT			316 SS		

OPTION CODE	DESCRIPTION
<b>Seat Material Options</b>	
K	Kel-F® Seat
P	PEEK® Seat
T	PTFE Seat
Z	Tefzel® Seat (Available in .250" Orifice Only)
<b>Stem Packing Material Options</b>	
T	PTFE Pressure-Core® Stem Seal
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)
<b>Miscellaneous Options</b> See Complete List on Page 24	
M1	Panel Mount
W	Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)

Refer to Chart B on Page 22 and Pressure and Process Temperature Charts on Page 23.



## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A581-303 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

## MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE	
	Straight	Angle
.187"	.83	.79
.250"	1.40	

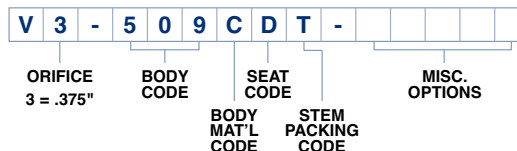
Approximate Valve Weight: 1.30 lbs [0.59 kg] each

HAND VALVES

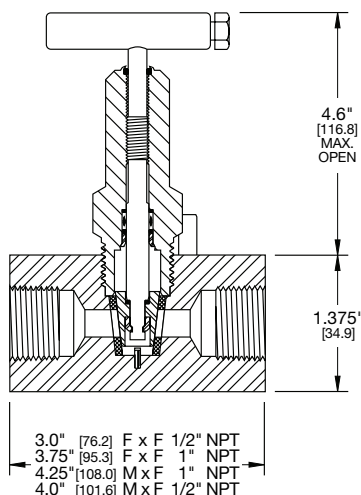
# Instrument Hand Valves ~ Soft Seat

**ORIFICE**

**.375"**



**V3-509**



## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

## MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.375"	3.00
Approximate Valve Weight: 3.00 lbs [1.36 kg] each	

## ORDERING INFORMATION

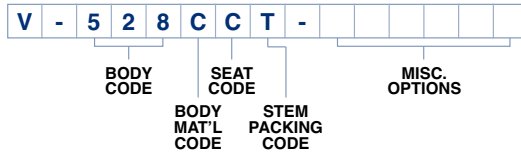
PART NO.	CONNECTIONS		BODY & BONNET	SEAT & PACKING
	INLET	OUTLET		
<b>.375" Orifice</b>				
V3-507CDT	1/2" MNPT	x 1/2" FNPT	Carbon Steel	Delrin® Cone Seat
V3-507SDT			316 SS	
V3-509CDT	1/2" FNPT	x 1/2" FNPT	Carbon Steel	PTFE Pressure-Core® Stem Seal
V3-509SDT			316 SS	
V3-537CDT	1" MNPT	x 1/2" FNPT	Carbon Steel	Max Pressure 6,000 PSI @ 200°F
V3-537SDT			316 SS	
V3-541CDT	3/4" FNPT	x 3/4" FNPT	Carbon Steel	
V3-541SDT			316 SS	
V3-543CDT	1" FNPT	x 1" FNPT	Carbon Steel	
V3-543SDT			316 SS	
V3-545CDT	1" MNPT	x 1" FNPT	Carbon Steel	
V3-545SDT			316 SS	
V3-547CDT	3/4" MNPT	x 3/4" FNPT	Carbon Steel	
V3-547SDT			316 SS	

OPTION CODE	DESCRIPTION	
<b>Seat Material Options</b>		
K	Kel-F® Seat	Refer to Chart D on Page 22 and Pressure and Process Temperature Charts on Page 23.
L	Rylon™ Seat	
P	PEEK® Seat	
T	PTFE Seat	
	PTFE Seat	
6	316 SS Seat	
<b>Stem Packing Material Options</b>		
T	PTFE Pressure-Core® Stem Seal	
G	Low-Torque™ Grafoil® Packed (Available with 316SS Seat Only)	
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)	
<b>Miscellaneous Options See Complete List on Page 24</b>		
W	Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

# Instrument Hand Valves ~ Hard Seat

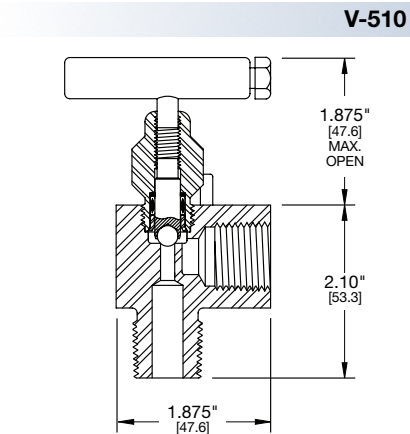
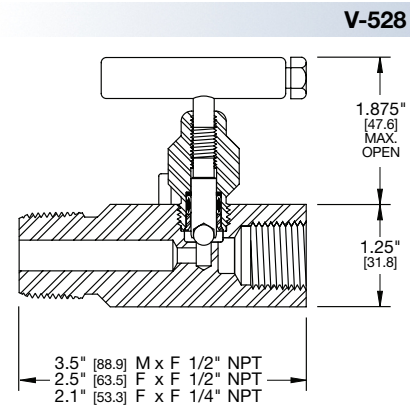
**ORIFICE**

**.187"**



## ORDERING INFORMATION

PART NO.	CONNECTIONS		BODY & BONNET	SEAT	SEAL
	INLET	OUTLET			
<b>.187" Orifice</b>					
V-500CCT	1/4" MNPT x 1/4" FNPT		Carbon Steel	Carbide Ball	PTFE Pressure-Core <sup>®</sup> Stem Seal
V-500SCT			316 SS		
V-502CCT	1/4" FNPT x 1/4" FNPT		Carbon Steel	Monel <sup>®</sup> Ball	
V-502SCT			316 SS		
V-502MNT			Monel <sup>®</sup>		
V-506CCT	1/2" MNPT x 1/2" FNPT		Carbon Steel	Carbide Ball	
V-506SCT			316 SS	Monel <sup>®</sup> Ball	
V-506MNT			Monel <sup>®</sup>		
V-506HHT			Hast-C	Hast-C	
V-508CCT	1/2" FNPT x 1/2" FNPT		Carbon Steel	Carbide Ball	
V-508SCT			316 SS		
V-508MNT			Monel <sup>®</sup>	Monel <sup>®</sup> Ball	
V-510CCT	1/2" MNPT x 1/2" FNPT Angle		Carbon Steel	Carbide Ball	
V-510SCT			316 SS		
V-528CCT	3/4" MNPT x 1/2" FNPT		Carbon Steel	Carbide Ball	
V-528SCT			316 SS		
V-530CCT	1/2" MNPT x 1/4" FNPT		Carbon Steel	Carbide Ball	
V-530SCT			316 SS		



OPTION CODE	DESCRIPTION
<b>Body Material Options</b>	
P	ASTM A105 CF Carbon Steel <i>For Use with Grafoil<sup>®</sup> Packed Bonnets</i>
<b>Seat Material Options</b>	
N	Monel <sup>®</sup> Ball Seat
R	Ceramic Ball Seat
6	316 SS Ball Seat
<b>Stem Packing Material Options</b>	
T	PTFE Pressure-Core <sup>®</sup> Stem Seal
G	Low-Torque <sup>™</sup> Grafoil <sup>®</sup> Packed
J	PTFE Pressure-Core <sup>®</sup> Stem Seal (Low Temperature -50°F)
<b>Miscellaneous Options</b> <i>See Complete List on Page 24</i>	
AB <sup>†</sup>	1/2" Parker A-LOK Welded in Compression Fitting
AM7	Male Pipe Socket Weld - Male Inlet Only
AP <sup>§</sup>	Female Pipe Socket Weld - Female Inlet and Female Outlet
AP7 <sup>§</sup>	Female Pipe Socket Weld - Female Inlet Only
M1	Panel Mount
W	Safety Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)

<sup>†</sup> Inlet and Outlet: Available on V-508 Valves Only  
<sup>§</sup> Available on V-502 and V-508 Valves Only

## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

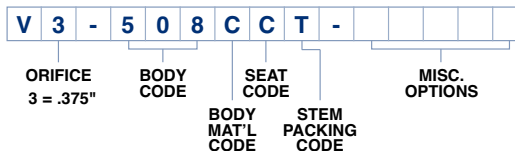
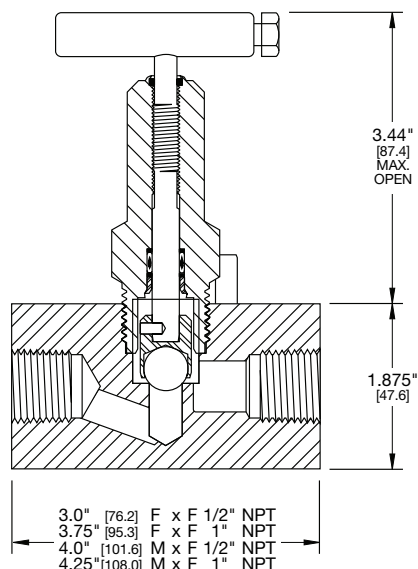
## MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE	
	Straight	Angle
.187"	.53	.79

Approximate Valve Weight: 1.30 lbs [0.59 kg] each

**HAND VALVES**

# Instrument Hand Valves ~ Hard Seat

**ORIFICE**
**.375"**

**V3-508**

**ORDERING INFORMATION**

PART NO.	CONNECTIONS		BODY & BONNET	SEAT & PACKING
	INLET	OUTLET		
<b>.375" Orifice</b>				
V3-506CCT	1/2" MNPT	x 1/2" FNPT	Carbon Steel	Carbide Ball Seat
V3-506SCT			316 SS	
V3-508CCT	1/2" FNPT	x 1/2" FNPT	Carbon Steel	PTFE Pressure-Core® Stem Seal
V3-508SCT			316 SS	
V3-536CCT	1" MNPT	x 1/2" FNPT	Carbon Steel	Max Pressure 6,000 PSI @ 200°F
V3-536SCT			316 SS	
V3-540CCT	3/4" FNPT	x 3/4" FNPT	Carbon Steel	
V3-540SCT			316 SS	
V3-542CCT	1" FNPT	x 1" FNPT	Carbon Steel	
V3-542SCT			316 SS	
V3-544CCT	1" MNPT	x 1" FNPT	Carbon Steel	
V3-544SCT			316 SS	

**MATERIALS OF CONSTRUCTION**

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

**MAX Cv RATINGS**

ORIFICE SIZE	BODY STYLE
	Straight
.375"	2.40
Approximate Valve Weight: 3.00 lbs [1.36 kg] each	

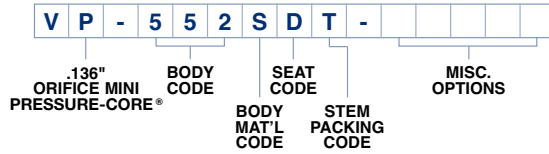
OPTION CODE	DESCRIPTION
<b>Body Material Options</b>	
P	ASTM A105 CF Carbon Steel For Use with Grafoil® Packed Bonnets
<b>Seat Material Options</b>	
R	Ceramic Ball Seat
6	316 SS Ball Seat
<b>Stem Packing Material Options</b>	
T	PTFE Pressure-Core® Stem Seal
G	Low-Torque™ Grafoil® Packed
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)
<b>Miscellaneous Options</b> See Complete List on Page 24	
AB†	1/2" Parker A-LOK Welded in Compression Fitting
AM7	Male Pipe Socket Weld - Male Inlet Only
AP	Female Pipe Socket Weld - Female Inlet and Female Outlet
AP7	Female Pipe Socket Weld - Female Inlet Only
AP8	Female Pipe Socket Weld - Female Outlet Only
S1	Monel Stem Material
W	Safety Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)

† Inlet and Outlet: Available on V3-508 Valves Only

# VP Mini and Cylinder Valves

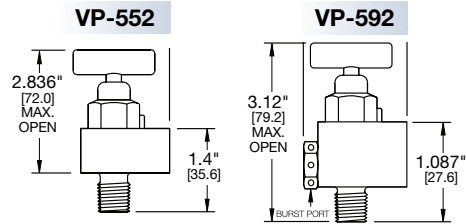
**ORIFICE**

**.136"**

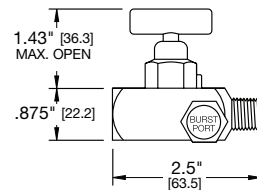


## ORDERING INFORMATION

PART NO.	CONNECTIONS		BODY & BONNET	SEAT & PACKING	
	INLET	OUTLET			
<b>Valve Only</b>					
VP-552SDT	1/4" MNPT	1/4" FNPT Angle	316 SS	Delrin® Washer Seat	
VP-554SDT	1/4" MNPT	1/4" MNPT Straight			
VP-556SDT	1/4" MNPT	1/4" FNPT Straight			
<b>Cylinder Valves with Burst Disc Port (Less Burst Disc)</b>					
VP-590SDT	1/4" MNPT	1/4" MNPT Straight	316 SS		
VP-591SDT	1/4" MNPT	1/4" FNPT Straight			
VP-592SDT	1/4" MNPT	1/4" FNPT Angle			
<b>Cylinder Valves with 1800 PSI Inconel Burst Disc</b>					
VP-590SDT-18	1/4" MNPT	1/4" MNPT Straight	316 SS		PTFE Pressure-Core® Stem Seal
VP-591SDT-18	1/4" MNPT	1/4" FNPT Straight			
VP-592SDT-18	1/4" MNPT	1/4" FNPT Angle			
<b>Cylinder Valves (Right Hand Product End) with 1/4" Gauge Port 18 = 1800 PSI Inconel Burst Disc</b>					
VP-306SDT	1/4" MNPT	1/4" FNPT Straight	316 SS		
VP-306SDT-18 with Burst Disc	1/4" MNPT	1/4" FNPT Straight			
<b>Cylinder Valves (Left Hand Product End) with 1/4" Gauge Port 18 = 1800 PSI Inconel Burst Disc</b>					
VP-307SDT	1/4" MNPT	1/4" FNPT Straight	316 SS		
VP-307SDT-18 with Burst Disc	1/4" MNPT	1/4" FNPT Straight			

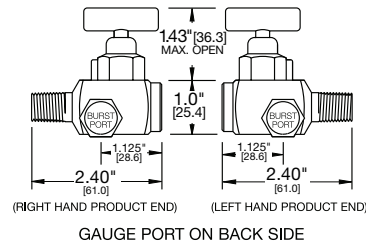


**VP-591**



**VP-306**

**VP-307**



## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	316 SS
Body and Bonnet	ASTM A479-316 SS
Stem	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS
Rupture Disc Plug	ASTM A479-316 SS
Handle Assembly	ASTM A581 18-8 300 SS

- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested
- Delrin® soft seats are rated 6,000 PSI @ 200° F or 3,000 PSI @ 200°F and are compatible with H<sub>2</sub>S / CO<sub>2</sub>

## MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE	
	Straight	Angle
.136"	.22	.27

Approximate Valve Weight: .60 lbs [0.27 kg] each

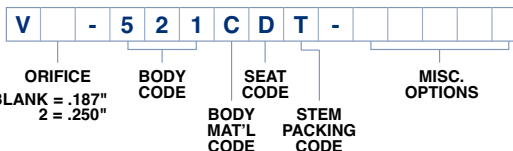
OPTION CODE	DESCRIPTION
<b>Seat Material Options</b>	
K	Kel-F® Seat
P	PEEK® Seat
T	PTFE Seat
<b>Miscellaneous Options</b> See Complete List on Page 24	
HA	Extruded Aluminum Round Handle ("T" / Bar Handle is Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)

Refer to Chart A on Page 22 and Pressure and Process Temperature Charts on Page 23.

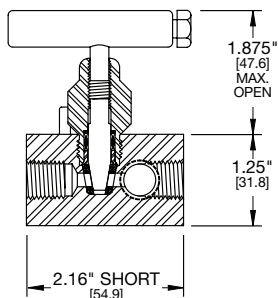
# Multi-Port Gauge Valves ~ Soft Seat

## ORIFICE

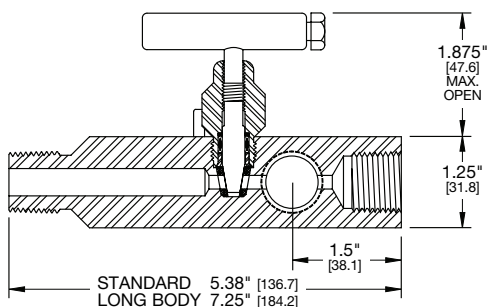
**.187" .250"**



**V-521**



**V-517**



## ORDERING INFORMATION

PART NO.	CONNECTIONS		BODY & BONNET	SEAT & PACKING	
	INLET	OUTLET			
<b>.187" Orifice</b>					
V-521CDT	1/4" FNPT	x (3) 1/4" FNPT Short	Carbon Steel	Delrin® Cone Seat	
V-521SDT			316 SS		
V-517CDT	1/2" MNPT	x (3) 1/2" FNPT Standard	Carbon Steel		
V-517SDT			316 SS		
V-519CDT	3/4" MNPT	x (3) 1/2" FNPT Standard	Carbon Steel	PTFE Pressure-Core® Stem Seal	
V-519SDT			316 SS		
V-573CDT	1/2" MNPT	x (3) 1/2" FNPT Longbody	Carbon Steel		
V-573SDT			316 SS		
V-574CDT	3/4" MNPT	x (3) 1/2" FNPT Longbody	Carbon Steel	Max Pressure 6,000 PSI @ 200°F	
V-574SDT			316 SS		
<b>.250" Orifice</b>					
V2-517CDT	1/2" MNPT	x (3) 1/2" FNPT Standard	Carbon Steel		
V2-517SDT			316 SS		
V2-519CDT	3/4" MNPT	x (3) 1/2" FNPT Standard	Carbon Steel		
V2-519SDT			316 SS		

## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

OPTION CODE	DESCRIPTION	
<b>Seat Material Options</b>		
K	Kel-F® Seat	Refer to Chart B on Page 22 and Pressure and Process Temperature Charts on Page 23.
P	PEEK® Seat	
T	PTFE Seat	
Z	Tefzel® Seat (Available in .250" Orifice Only)	
<b>Stem Packing Materials Options</b>		
T	PTFE Pressure-Core® Stem Seal	
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)	
<b>Miscellaneous Options See Complete List on Page 24</b>		
AM7	Male Pipe Socket Weld - Male Inlet Only	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	
Y	OS&Y Bonnet Carbon Steel Or 316SS	

## MAX Cv RATINGS

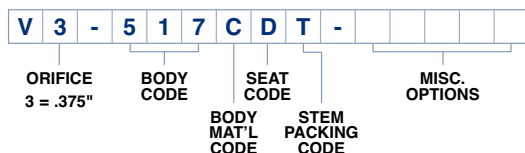
ORIFICE SIZE	BODY STYLE Straight
.187"	.83
.250"	1.40

Approximate Valve Weight: 1.00 lb [0.45 kg] each (Short)  
 2.30 lbs [1.04 kg] each (Standard)  
 3.00 lbs [1.36 kg] each (Longbody)

# Multi-Port Gauge Valves ~ Soft Seat

**ORIFICE**

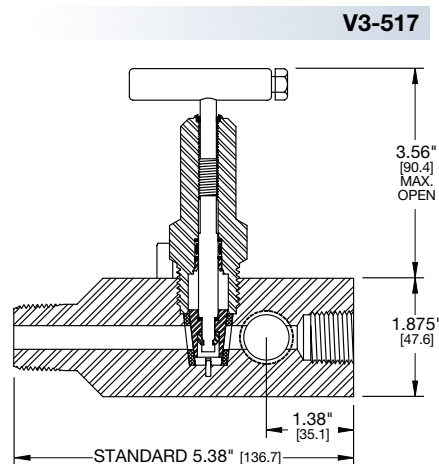
**.375"**



## ORDERING INFORMATION

PART NO.	CONNECTIONS		BODY & BONNET	SEAT & PACKING
	INLET	OUTLET		
<b>.375" Orifice</b>				
V3-517CDT	1/2" MNPT	x (3) 1/2" FNPT	Carbon Steel	Delrin® Cone Seat
V3-517SDT	Standard		316 SS	
V3-519CDT	3/4" MNPT	x (3) 1/2" FNPT	Carbon Steel	PTFE Pressure-Core® Stem Seal
V3-519SDT	Standard		316 SS	
V3-577CDT	1" MNPT	x (3) 1/2" FNPT	Carbon Steel	Max Pressure 6,000 PSI @ 200°F
V3-577SDT	Standard		316 SS	

OPTION CODE	DESCRIPTION	
<b>Seat Material Options</b>		
K	Kel-F® Seat	Refer to Charts D and E on Page 22 and Pressure and Process Temperature Charts on Page 23.
L	Rylon™ Seat	
P	PEEK® Seat	
T	PTFE Seat	
6	316 SS Seat	
<b>Stem Packing Material Options</b>		
T	PTFE Pressure-Core® Stem Seal	
G	Low-Torque™ Grafoil® Packed (Available with 316 SS Cone Only)	
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)	
<b>Miscellaneous Options</b> See Complete List on Page 24		
AM7	Male Pipe Socket Weld - Male Inlet Only	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	
Y	OS&Y Bonnet Carbon Steel Or 316SS	



## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

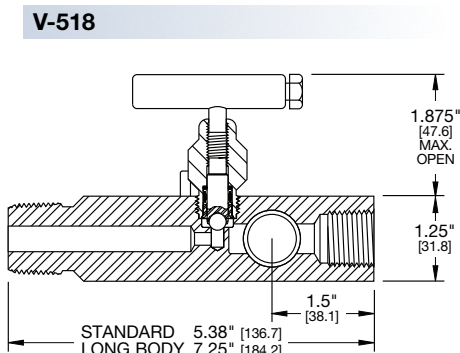
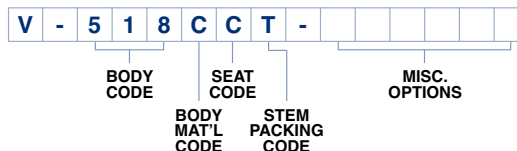
## MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE
	Straight
.375"	3.00

Approximate Valve Weight: 2.30 lbs [1.04 kg] each

**MULTI-PORT GAUGE VALVES**

# Multi-Port Gauge Valves ~ Hard Seat

**ORIFICE**
**.187"**


## ORDERING INFORMATION

PART NO.	CONNECTIONS		BODY & BONNET	SEAT	PACKING
	INLET	OUTLET			
<b>.187" Orifice</b>					
V-516CCT	1/2" MNPT x (3) 1/2" FNPT Standard		Carbon Steel	Carbide Ball	PTFE Pressure-Core® Stem Seal  Max Pressure 10,000 PSI @ 200°F
V-516SCT			316 SS	Monel® Ball	
V-516MNT			Monel®	Monel® Ball	
V-518CCT	3/4" MNPT x (3) 1/2" FNPT Standard		Carbon Steel	Carbide Ball	
V-518SCT			316 SS	Monel® Ball	
V-518MNT			Monel®	Monel® Ball	
V-520CCT	1/2" MNPT x (3) 1/2" FNPT Longbody		Carbon Steel	Carbide Ball	
V-520SCT			316 SS		
V-532CCT	3/4" MNPT x (3) 1/2" FNPT Longbody		Carbon Steel	Carbide Ball	
V-532SCT			316 SS		

OPTION CODE	DESCRIPTION
<b>Body Material Options</b>	
P	ASTM A105 CF Carbon Steel For Use with Grafoil® Packed Bonnets
<b>Seat Material Options</b>	
N	Monel® Ball Seat
R	Ceramic Ball Seat
6	316 SS Ball Seat
<b>Stem Packing Material Options</b>	
T	PTFE Pressure-Core® Stem Seal
G	Low-Torque™ Grafoil® Packed
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)
<b>Miscellaneous Options</b> See Complete List on Page 24	
AM7	Male Pipe Socket Weld - Male Inlet Only
S1	Monel Stem Material
W	Safety Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)
Y	OS&Y Bonnet Carbon Steel Or 316SS

## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

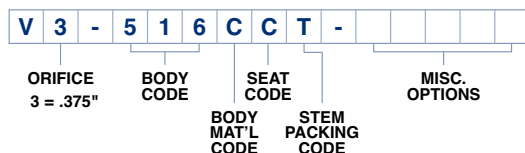
## MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE
	Straight
.187"	.53
Approximate Valve Weight: 2.30 lbs [1.04 kg] each (Standard) 3.00 lbs [1.36 kg] each (Longbody)	

# Multi-Port Gauge Valves ~ Hard Seat

**ORIFICE**

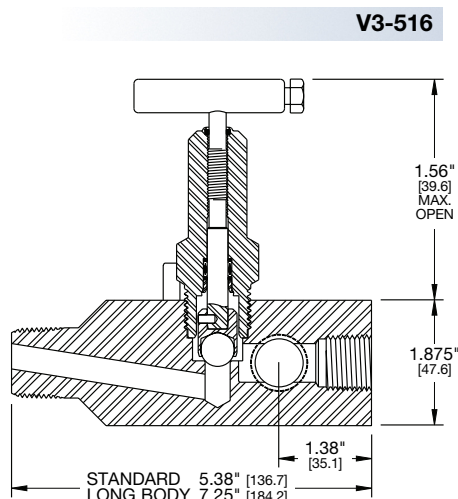
**.375"**



## ORDERING INFORMATION

PART NO.	CONNECTIONS		BODY & BONNET	SEAT & PACKING
	INLET	OUTLET		
<b>.375" Orifice</b>				
V3-516CCT	1/2" MNPT x (3) 1/2" FNPT	Standard	Carbon Steel	Carbide Ball Seat
V3-516SCT	Standard		316 SS	PTFE Pressure-Core® Stem Seal
V3-518CCT	3/4" MNPT x (3) 1/2" FNPT	Standard	Carbon Steel	Refer to page 22 Press./Temp. Chart C.
V3-518SCT	Standard		316 SS	
V3-516PCG	1/2" MNPT x (3) 1/2" FNPT	Standard	Carbon Steel	Carbide Ball Seat
V3-516SCG	Standard		316 SS	
V3-518PCG	3/4" MNPT x (3) 1/2" FNPT	Standard	Carbon Steel	Grafoil® Packed
V3-518SCG	Standard		316 SS	
V3-520PCG	1/2" MNPT x (3) 1/2" FNPT	Longbody	Carbon Steel	Refer to page 22 Press./Temp. Chart E
V3-520SCG	Longbody		316 SS	
V3-532PCG	3/4" MNPT x (3) 1/2" FNPT	Longbody	Carbon Steel	Carbide Ball Seat
V3-532SCG	Longbody		316 SS	

OPTION CODE	DESCRIPTION
<b>Body Material Options</b>	
P	ASTM A105 CF Carbon Steel <i>For Use with Grafoil® Packed Bonnets</i>
<b>Seat Material Options</b>	
R	Ceramic Ball Seat
6	316 SS Ball Seat
<b>Stem Packing Material Options</b>	
T	PTFE Pressure-Core® Stem Seal
G	Low-Torque™ Grafoil® Packed
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)
Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.	
<b>Miscellaneous Options</b> See Complete List on Page 24	
AM7	Male Pipe Socket Weld - Male Inlet Only
W	Safety Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)
Y	OS&Y Bonnet Carbon Steel Or 316SS



## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

## MAX Cv RATINGS

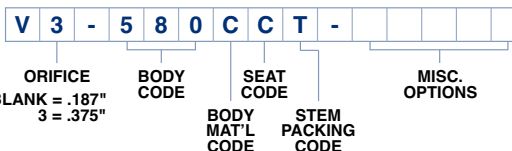
ORIFICE SIZE	BODY STYLE
	Straight
.375"	2.40
Approximate Valve Weight: 2.30 lbs [1.04 kg] each (Standard)	
3.00 lbs [1.36 kg] each (Longbody)	

MULTI-PORT GAUGE VALVES

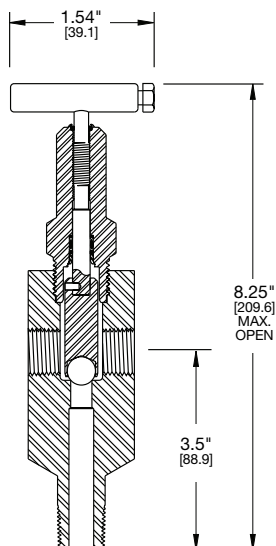
# Root Valves ~ Hard Seat

## ORIFICE

**.187" .375"**



### V3-580



## ORDERING INFORMATION

PART NO.	CONNECTIONS		BODY & BONNET	SEAT & PACKING
	INLET	OUTLET		
<b>.187" Orifice</b>				
V-579CCT	1/2" MNPT	x (1) 1/2" FNPT	Carbon Steel	Carbide Ball Seat
V-579SCT	1/2" MNPT	x (1) 1/2" FNPT	316 SS	
V-580CCT	1/2" MNPT	x (2) 1/2" FNPT	Carbon Steel	
V-580SCT	1/2" MNPT	x (2) 1/2" FNPT	316 SS	
V-582CCT	3/4" MNPT	x (2) 1/2" FNPT	Carbon Steel	
V-582SCT	3/4" MNPT	x (2) 1/2" FNPT	316 SS	
V-584CCT	1" MNPT	x (2) 1/2" FNPT	Carbon Steel	PTFE Pressure-Core® Stem Seal
V-584SCT	1" MNPT	x (2) 1/2" FNPT	316 SS	
<b>.375" Orifice</b>				
V3-579CCT	1/2" MNPT	x (1) 1/2" FNPT	Carbon Steel	Max Pressure 6,000 PSI @ 200°F
V3-579SCT	1/2" MNPT	x (1) 1/2" FNPT	316 SS	
V3-580CCT	1/2" MNPT	x (2) 1/2" FNPT	Carbon Steel	
V3-580SCT	1/2" MNPT	x (2) 1/2" FNPT	316 SS	
V3-582CCT	3/4" MNPT	x (2) 1/2" FNPT	Carbon Steel	
V3-582SCT	3/4" MNPT	x (2) 1/2" FNPT	316 SS	
V3-584CCT	1" MNPT	x (2) 1/2" FNPT	Carbon Steel	
V3-584SCT	1" MNPT	x (2) 1/2" FNPT	316 SS	

## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body	ASTM A105 CF	ASTM A479-316 SS
Bonnet	ASTM A105	ASTM A351-CF8M
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Yoke	ASTM A351-CF8M	ASTM A351-CF8M
Packing Follower	ASTM A479-316 SS	ASTM A479-316 SS
Bolt	ASTM A449-TYPE 1-CS	ASTM A193-B8M
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

## MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.187"	.53
.375"	3.00

Approximate Valve Weight: 3.70 lbs [1.68 kg] each (.187" Orifice)  
4.50 lbs [2.04 kg] each (.375" Orifice)

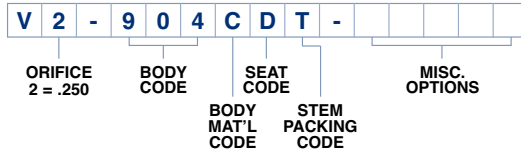
OPTION CODE	DESCRIPTION
<b>Seat Material Options</b>	
R	Ceramic Ball Seat
6	316 SS Ball Seat
<b>Stem Packing Material Option</b>	
T	PTFE Pressure-Core® Stem Seal
G	Low-Torque™ Grafoil® Packed
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)
<b>Miscellaneous Options</b> See Complete List on Page 24	
AM7	Male Pipe Socket Weld - Male Inlet Only
TH	Hydrostatic Testing
W	Safety Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)
Y	OS&Y Bonnet Carbon Steel Or 316SS

Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.

# Block & Bleed Valves ~ Soft Seat

**ORIFICE**

**.250"**



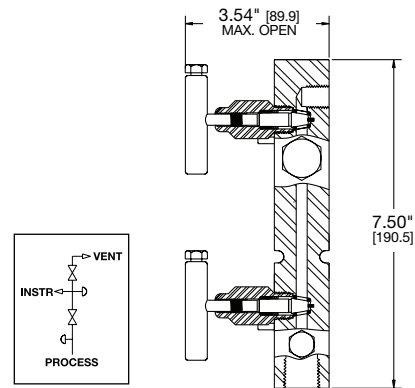
## ORDERING INFORMATION

PART NO.	CONNECTIONS		BODY & BONNET	SEAT & PACKING
	INLET	OUTLET		
<b>.250" Orifice</b>				
V2-904CDT	1/2" FNPT	x 1/2" FNPT	Carbon Steel	Delrin® Cone Seat PTFE Pressure-Core® Stem Seal
V2-904SDT			316 SS	Max Pressure 6,000 PSI @ 200°F

OPTION CODE	DESCRIPTION
<b>Seat Material Options</b>	
K	Kel-F® Seat
P	PEEK® Seat
T	PTFE Seat
<b>Stem Packing Material Options</b>	
T	PTFE Pressure-Core® Stem Seal
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)
<b>Miscellaneous Options</b> See Complete List on Page 24	
W	Safety Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)

Refer to Chart B on Page 22 and Pressure and Process Temperature Charts on Page 23.

**V2-904**



## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

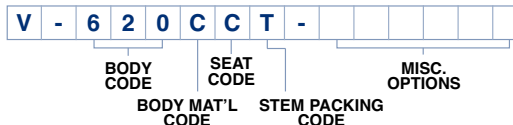
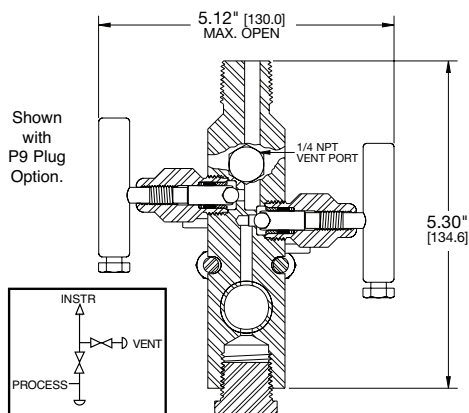
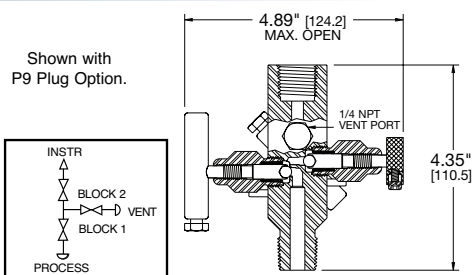
## MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE
	Straight
.250"	1.40

Approximate Valve Weight: 2.50 lbs [1.13 kg] each

**BLOCK & BLEED VALVES**

# Block & Bleed Valves ~ Hard Seat

**ORIFICE**
**.187"**

**V-620**

**V-690**

**ORDERING INFORMATION**

PART NO.	CONNECTIONS		BODY & BONNET	SEAT & PACKING
	INLET	OUTLET		
<b>.187" Orifice</b>				
V-570CCT	1/2" MNPT	1/2" FNPT	Carbon Steel	Carbide Ball Seat
V-570SCT	1/2" FNPT	1/2" FNPT	316 SS	
V-626CCT	1/2" FNPT	1/2" FNPT	Carbon Steel	PTFE Pressure-Core® Stem Seal
V-626SCT	1/2" FNPT	1/2" FNPT	316 SS	
V-572CCT	3/4" MNPT	1/2" FNPT	Carbon Steel	
V-572SCT	3/4" MNPT	1/2" FNPT	316 SS	
V-612CCT	1/2" MNPT	1/2" MNPT	Carbon Steel	
V-612SCT	1/2" MNPT	1/2" MNPT	316 SS	
V-614CCT	1/2" FNPT	1/2" MNPT	Carbon Steel	
V-614SCT	1/2" FNPT	1/2" MNPT	316 SS	
V-616SCT	3/4" MNPT	1/2" MNPT	316 SS	Max Pressure 10,000 PSI @ 200°F
V-620CCT*	(2)1/2" FNPT x (1)1/2" MNPT		Carbon Steel	
V-620SCT*	(2)1/2" FNPT x (1)1/2" MNPT		316 SS	
V-700SCT	1/2" MNPT	1/2" MNPT	316 SS	Stabilized Design
<b>Double Block and Bleed</b>				
V-690CCT	1/2" MNPT	1/2" FNPT	Carbon Steel	316 SS
V-690SCT	1/2" FNPT	1/2" FNPT	316 SS	
V-692CCT	3/4" MNPT	1/2" FNPT	Carbon Steel	316 SS
V-692SCT	3/4" FNPT	1/2" FNPT	316 SS	
V-905CCT	3/4" MNPT	1/2" FNPT	Carbon Steel	316 SS
V-905SCT	3/4" FNPT	1/2" FNPT	Longbody	

\* V-620 Bracket Mounted Block and Bleed Valve Includes mounting U-Bolt as standard.  
V-620 Bracket options shown at bottom of page.

**MATERIALS OF CONSTRUCTION**

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

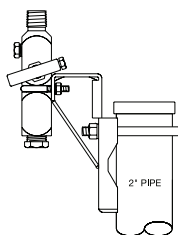
- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

**MAX Cv RATINGS**

ORIFICE SIZE	BODY STYLE
.187"	Straight
	.53

Approximate Valve Weight: 2.50 lbs [1.13 kg] each

OPTION CODE	DESCRIPTION
<b>Body Material Options</b>	
P	ASTM A105 CF Carbon Steel For Use with Grafoil® Packed Bonnets
<b>Seat Material Options</b>	
R	Ceramic Seat
6	316 SS Ball Seat
<b>Stem Packing Material Options</b>	
T	PTFE Pressure-Core® Stem Seal
G	Low-Torque™ Grafoil® Packed
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)
<b>Miscellaneous Options See Complete List on Page 24</b>	
AM7	Male Pipe Socket Weld - Male Inlet Only
P9	Hex Head Pipe Plug in Vent/Test Port
W	Safety Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)



OPTION CODE	DESCRIPTION
V-620 Bracket Options	
VCH	AK-002-10-HD Versa-Mount Heavy Duty Manifold Bracket - Carbon Steel
VSH	AK-002-C0-HD Versa-Mount Heavy Duty Manifold Bracket - 316 SS
VC	AK-002-10 Versa-Mount Manifold Bracket - Carbon Steel
VS	AK-002-C0 Versa-Mount Manifold Bracket - 316 SS

# Three-Valve Double Block & Bleed Monoflange

**ORIFICE**

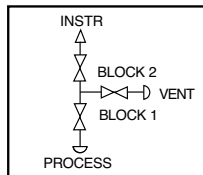
**.187"**

Note: "R" denotes RTJ (Ring Joint Flange) Facings.

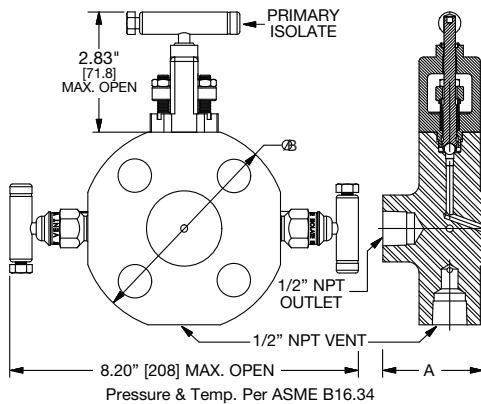
BODY STYLE	SIZE FLANGE IN.	PRESSURE RATING LB.	BODY CODE	SEAT CODE	STEM SEAL CODE OS&Y FIRST ISOLATE	STEM SEAL CODE SECOND ISOLATE & VENT	OPTION CODES
MF3Y	-	-					
MFR3Y	-	-					

BODY CODE	HARD SEAT CODE	HARD SEAT CODE	HARD SEAT CODE
[Std.] 316 SS S	C Carbide Ball [Std.] R Ceramic Ball 6 316 SS Ball	G Grafoil® Packed [Std.] P PTFE Packed	[Std.] PTFE Pressure-Core® T Grafoil® Packed G PTFE Packed P FKM O-Ring V Low-Temp Pressure-Core® J

BODY STYLE	SIZE FLANGE IN.	PRESSURE RATING LB.	BODY CODE	SEAT CODE	STEM SEAL CODE FIRST ISOLATE	STEM SEAL CODE SECOND ISOLATE & VENT	OPTION CODES
MF3	-	-					
MFR3	-	-					



BODY CODE	HARD SEAT CODE	HARD SEAT CODE
[Std.] 316 SS S	C Carbide Ball [Std.] R Ceramic Ball 6 316 SS Ball	[Std.] PTFE Pressure-Core® T Grafoil® Packed G PTFE Packed P FKM O-Ring V Low-Temp Pressure-Core® J



OPTION DESCRIPTION	OPTION CODE
1/2" Male Pipe Socket Weld (Instrument)	AM8
Anti-Tamper Bonnet (All Positions)	GA
Anti-Tamper Bonnet (Isolate Only)	GC
Anti-Tamper Bonnet (Vent Valve Only)	GE
Bonnet Lock-Out (All Positions - Lock Not Provided - Not for OS&Y)	GJ
Bonnet Lock-Out (Isolate Only - Lock Not Provided - Not for OS&Y)	GK
Bonnet Lock-Out (Vent Valve Only - Lock Not Provided)	GM
Hex Head Pipe Plug in Vent/Test Port	P9
Safety Bonnet Lock Plate	W
Paper Tag	WK
316 SS Tag	W1
Clean for Critical Service (Oxygen or Chlorine)	XL

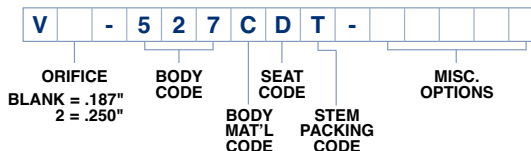
SIZE IN.	RATING LB.	DIMENSIONS, INCHES [mm]			WEIGHT LB. [KG]	SIZE IN.	RATING LB.	DIMENSIONS, INCHES [mm]			WEIGHT LB. [KG]		
		A - RF	A - RTJ	B				A - RF	A - RTJ	B			
1/2	150	2.25 [57]	-	3.5 [89]	3.5	1.6	1	600	2.44 [62]	2.44 [62]	4.9 [124]	7.5	3.4
1/2	300	2.25 [57]	2.41 [61]	3.8 [96]	4.1	1.9	1	900/1500	2.44 [62]	2.44 [62]	5.9 [150]	11.8	5.4
1/2	600	2.44 [62]	2.41 [61]	3.8 [96]	4.0	1.8	1	2500	2.44 [62]	2.44 [62]	6.3 [159]	13.5	6.1
1/2	900/1500	2.44 [62]	2.41 [61]	4.8 [121]	7.1	3.2	1-1/2	150	2.25 [57]	2.44 [62]	5.0 [127]	8.0	3.6
1/2	2500	2.44 [62]	2.44 [62]	5.3 [134]	9.6	4.4	1-1/2	300	2.25 [57]	2.44 [62]	6.1 [156]	12.8	5.8
3/4	150	2.25 [57]	-	3.9 [99]	4.2	1.9	1-1/2	600	2.44 [62]	2.44 [62]	6.1 [156]	12.8	5.8
3/4	300	2.25 [57]	2.44 [62]	4.6 [118]	6.6	3.0	1-1/2	900/1500	2.44 [62]	2.44 [62]	7.0 [178]	17.0	7.7
3/4	600	2.44 [62]	2.44 [62]	4.6 [118]	6.6	3.0	1-1/2	2500	2.81 [71]	2.87 [73]	8.0 [203]	24.9	11.3
3/4	900/1500	2.44 [62]	2.44 [62]	5.1 [130]	8.2	3.7	2	150	2.25 [57]	2.44 [62]	6.0 [153]	12.4	5.6
3/4	2500	2.44 [62]	2.44 [62]	5.5 [140]	9.5	2.0	2	300	2.25 [57]	2.50 [64]	6.5 [165]	19.6	6.6
1	150	2.25 [57]	2.44 [62]	4.3 [108]	5.1	2.3	2	600	2.44 [62]	2.50 [64]	6.5 [165]	14.6	6.6
1	300	2.25 [57]	2.44 [62]	4.9 [124]	7.5	3.4	2	900/1500	2.56 [65]	2.62 [67]	8.5 [216]	28.2	12.8
							2	2500	3.06 [78]	-	9.393 [235]	43.0	20.0

**BLOCK & BLEED MONOFLANGE**

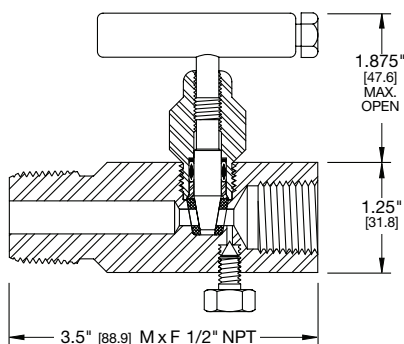
# Bleeder Screw Gauge Valves ~ Soft Seat

## ORIFICE

**.187" .250"**



**V-527**



## ORDERING INFORMATION

PART NO.	CONNECTIONS		BODY & BONNET	SEAT & PACKING
	INLET	OUTLET		
<b>.187" Orifice</b>				
V-523CDT	1/2" MNPT	x 1/2" FNPT	Carbon Steel	Delrin® Cone Seat
V-523SDT			316 SS	
V-525CDT	1/2" FNPT	x 1/2" FNPT	Carbon Steel	PTFE Pressure-Core® Stem Seal
V-525SDT			316 SS	
V-527CDT	3/4" MNPT	x 1/2" FNPT	Carbon Steel	
V-527SDT			316 SS	
<b>.250" Orifice</b>				
V2-523CDT	1/2" MNPT	x 1/2" FNPT	Carbon Steel	Max Pressure 6,000 PSI @ 200°F
V2-523SDT			316 SS	
V2-527CDT	3/4" MNPT	x 1/2" FNPT	Carbon Steel	
V2-527SDT			316 SS	

OPTION CODE	DESCRIPTION	
<b>Seat Material Options</b>		
K	Kel-F® Seat	Refer to Chart B on Page 22 and Pressure and Process Temperature Charts on Page 23.
P	PEEK® Seat	
T	PTFE Seat	
Z	Tefzel® Seat (Available in .250" Orifice Only)	
<b>Stem Packing Material Options</b>		
T	PTFE Pressure-Core® Stem Seal	
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)	
<b>Miscellaneous Options See Complete List on Page 24</b>		
M1	Panel Mount	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Bleed Screw	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

## MAX Cv RATINGS

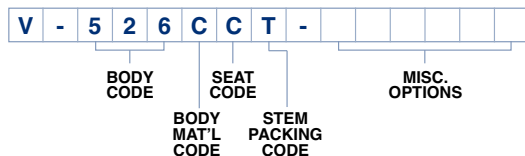
ORIFICE SIZE	BODY STYLE Straight
.187"	.83
.250"	1.40

Approximate Valve Weight: 1.30 lbs [0.59 kg] each

# Bleeder Screw Gauge Valves ~ Hard Seat

**ORIFICE**

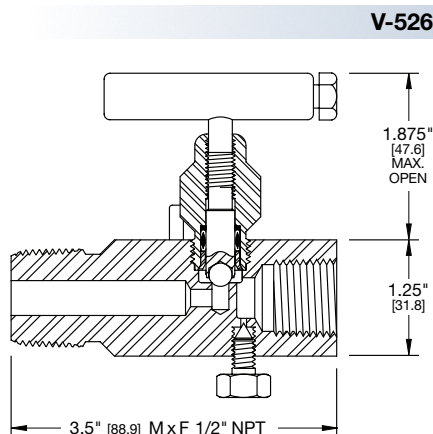
**.187"**



## ORDERING INFORMATION

PART NO.	CONNECTIONS		BODY & BONNET	SEAT & PACKING
	INLET	OUTLET		
<b>.187" Orifice</b>				
V-522CCT	1/2" MNPT x 1/2" FNPT		Carbon Steel	Carbide Ball Seat
V-522SCT			316 SS	
V-524CCT	1/2" FNPT x 1/2" FNPT		Carbon Steel	PTFE Pressure-Core® Stem Seal
V-524SCT			316 SS	
V-526CCT	3/4" MNPT x 1/2" FNPT		Carbon Steel	Max Pressure 10,000 PSI @ 200°F
V-526SCT			316 SS	
V-606CCT	1/2" MNPT x 1/2" MNPT		Carbon Steel	
V-606SCT			316 SS	
V-608CCT	3/4" MNPT x 1/2" MNPT		Carbon Steel	
V-608SCT			316 SS	

OPTION CODE	DESCRIPTION
<b>Body Material Options</b>	
P	ASTM A105 CF Carbon Steel <i>For Use with Grafoil® Packed Bonnets</i>
<b>Seat Material Options</b>	
R	Ceramic Ball Seat
6	316 SS Ball Seat
<b>Stem Packing Material Options</b>	
T	PTFE Pressure-Core® Stem Seal
G	Low-Torque™ Grafoil® Packed
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)
<b>Miscellaneous Options</b> <i>See Complete List on Page 24</i>	
AM7	Male Pipe Socket Weld - Male Inlet Only
AP7	Female Pipe Socket Weld - Female Inlet Only
M1	Panel Mount
W	Safety Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)



## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Bleed Screw	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

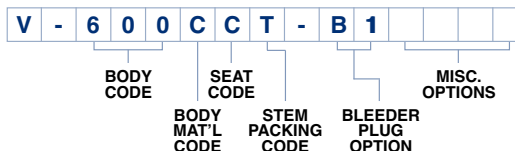
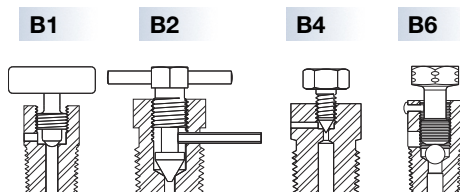
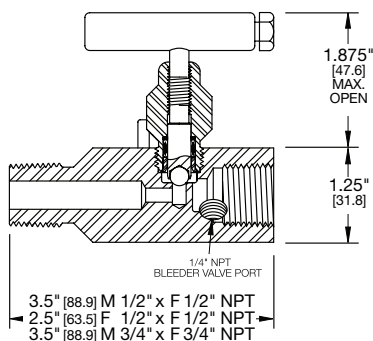
- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

## MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.187"	.53
Approximate Valve Weight: 1.30 lbs [0.59 kg] each	

**BLEEDER SCREW GAUGE VALVES**

# Bleeder Valves ~ Hard Seat

**ORIFICE**
**.187"**

**V-600 Main Valve**

**Bleeder Plug Options**  
 Installed in 1/4" NPT Main Valve Bleeder Port

**ORDERING INFORMATION**

PART NO.	CONNECTIONS		BODY & BONNET	MAIN VALVE SEAT & PACKING
	INLET	OUTLET		
<b>.187" Orifice</b>				
V-600CCT	1/2" MNPT	x 1/2" FNPT	Carbon Steel	Carbide Ball Seat
V-600SCT			316 SS	
V-602CCT	1/2" FNPT	x 1/2" FNPT	Carbon Steel	PTFE Pressure-Core® Stem Seal
V-602SCT			316 SS	
V-604CCT	3/4" MNPT	x 1/2" FNPT	Carbon Steel	Max Pressure 10,000 PSI @ 200°F
V-604SCT			316 SS	

OPTION CODE	DESCRIPTION	
<b>Seat Material Options</b>		
R	Ceramic Ball Seat	Refer to Chart C on Page 22 and Pressure and Process Temperature Charts on Page 23.
6	316 SS Ball Seat	
<b>Stem Packing Material Options</b>		
T	PTFE Pressure-Core® Stem Seal	Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)	
<b>Bleeder Plug Options</b> Installed in 1/4" NPT Bleed Port Bleeder Valve Body is same material as Main Valve.		
B1	Carbide Ball Bleeder Plug Model A7-521	Max Pressure 10,000 PSI @ 200°F
B2	Bleed-T Plug Model A7-528	
B4	Mini-Hex Bleeder Plug Model A7-525	
B6	SS Ball Bleed Plug Model BV10N4	
<b>Miscellaneous Options</b> See Complete List on Page 24		
AM7	Male Pipe Socket Weld - Male Inlet Only	
M1	Panel Mount	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

**MAIN VALVE MATERIALS OF CONSTRUCTION**

PART DESCRIPTION	CARBON STEEL		316 SS	
Body and Bonnet	ASTM A108 CS		ASTM A479-316 SS	
Stem	ASTM A479-316 SS		ASTM A479-316 SS	
Seal Retainer	ASTM A479-316 SS		ASTM A479-316 SS	
Handle Assembly	ASTM A108 CS		ASTM A581 18-8 300 SS	

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

**VALVE MAX Cv RATINGS**

ORIFICE SIZE	BODY STYLE
.187"	Straight
	.53

Approximate Weight of Main Valve: 1.60 lbs [0.73 kg] each  
 Approximate Weight of Bleeder Plugs: See page 19.

# Bleeder Valves and Plugs

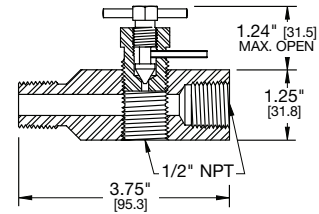
BLEEDER VALVES AND PLUGS

## ORDERING INFORMATION

### Bleed "T" Valves

PART NO.	CONNECTIONS	BODY & STEM	SEAT	BLEED "T" PLUG
V-597-10	1/2" MNPT x (2) 1/2" FNPT	A108-1215 CS / A479-316 SS	Integral Metal	A108-1215 CS
V-597-C0		A479-316 SS		A479-316 SS
B8-597-10	1/2" MNPT x (3) 1/2" FNPT	A108-1215 CS / A479-316 SS		None
B8-597-C0		A479-316 SS		
V-598-10	3/4" MNPT x (2) 1/2" FNPT	A108-1215 CS / A479-316 SS		A108-1215 CS
V-598-C0		A479-316 SS		A479-316 SS
B8-598-10	3/4" MNPT x (3) 1/2" FNPT	A108-1215 CS / A479-316 SS	None	
B8-598-C0		A479-316 SS		

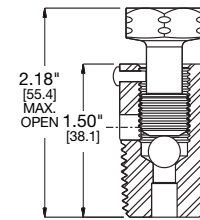
**MAX Cv Rating:** .125      **Approximate Weight:** 1.00 lbs [0.45 kg] each  
**Carbon Steel:** 10,000 PSI @ 200°F or 1,500 PSI @ 800°F  
**316 SS:** 10,000 PSI @ 200°F or 1,500 PSI @ 1,000°F



### Body Vent Plugs B6

PART NO.	CONNECTIONS	BODY & STEM	SEAT
BV10N2-10	1/4" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	410 SS Ball
BV10N2-C0		ASTM A479-316 SS / ASTM A479-316 SS	Carbide Ball
BV10N4-10	1/2" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	410 SS Ball
BV10N4C0		ASTM A479-316 SS / ASTM A479-316 SS	Carbide Ball

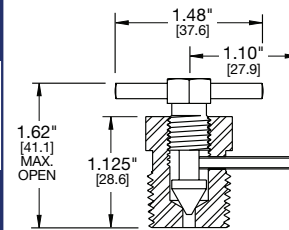
**Approximate Weight:** .50 lbs [0.23 kg] each  
**Carbon Steel:** 10,000 PSI @ 200°F or 1,500 PSI @ 500°F  
**316 SS:** 10,000 PSI @ 200°F or 1,500 PSI @ 1,000°F



### Bleed "T" Plugs B2

PART NO.	CONNECTIONS	BODY & STEM	SEAT
A7-528-10	1/4" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	Integral Metal
A7-528-C0		ASTM A479-316 SS / ASTM A479-316 SS	
A7-529-10	1/2" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	
A7-529-C0		ASTM A479-316 SS / ASTM A479-316 SS	

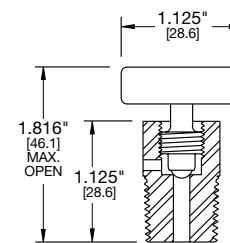
**MAX Cv Rating:** .125      **Approximate Weight:** .50 lbs [0.23 kg] each  
**Carbon Steel:** 10,000 PSI @ 200°F or 1,500 PSI @ 500°F  
**316 SS:** 10,000 PSI @ 200°F or 1,500 PSI @ 1,000°F



### Carbide Ball Bleed Plugs B1

PART NO.	CONNECTIONS	BODY & STEM	SEAT
A7-521-10	1/4" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	Carbide Ball
A7-521-C0		ASTM A479-316 SS / ASTM A479-316 SS	
A7-520-10	1/2" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	
A7-520-C0		ASTM A479-316 SS / ASTM A479-316 SS	

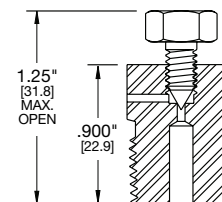
**Approximate Weight:** .50 lbs [0.23 kg] each  
**Carbon Steel:** 10,000 PSI @ 200°F or 1,500 PSI @ 500°F  
**316 SS:** 10,000 PSI @ 200°F or 1,500 PSI @ 1,000°F



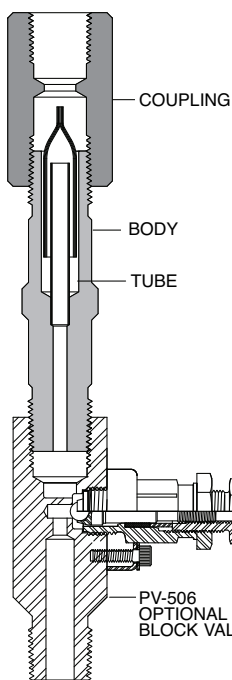
### Mini-Hex Bleed Plugs B4

PART NO.	CONNECTIONS	BODY & BLEED SCREW	SEAT
A7-525-10	1/4" MNPT	ASTM A108-1215 CS / 17-4 PH	Integral Metal
A7-525-C0		ASTM A479-316 SS / 17-4 PH	
A7-526-10	1/2" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	
A7-526-C0		ASTM A479-316 SS / ASTM A479-316 SS	

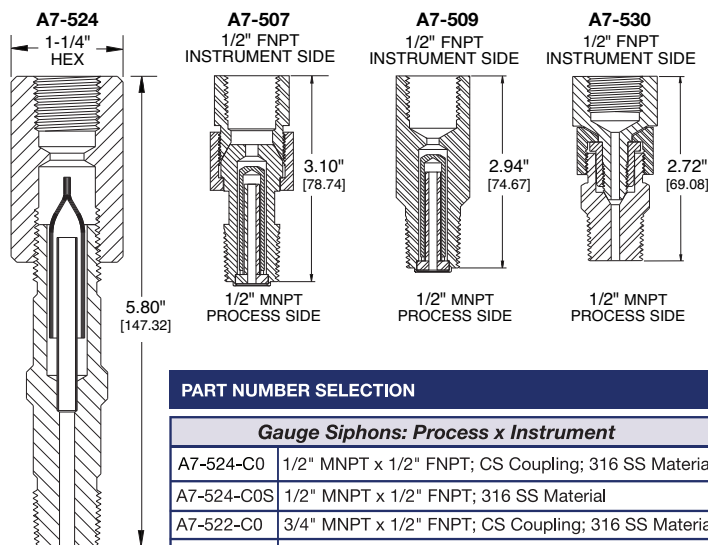
**Approximate Weight:** .30 lbs [0.14 kg] each  
**Carbon Steel:** 10,000 PSI @ 200°F or 1,500 PSI @ 500°F  
**316 SS:** 10,000 PSI @ 200°F or 1,500 PSI @ 1,000°F



## Gauge Siphons and Swivels



The PGI Gauge Siphon replaces the old style "Pigtail" siphon. The siphon provides a thermal barrier, protecting your instruments from harmful vapors. The siphon can be used as either a freeze or steam protector when used with the proper fill fluids. When very high heat is present, the siphon, used in conjunction with the PGI V-506 Grafoil® packed Hand Valve, reduces temperatures seen at the instrument by lengthening the condensate leg.

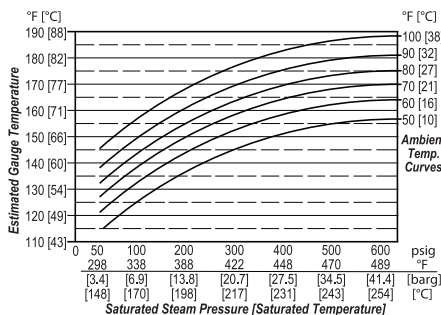


### ESTIMATED GAUGE TEMPERATURES

By knowing the material of construction, saturated steam conditions, and ambient temperature, the chart below can estimate the gauge temperature for the A7-522/524-C0 & C0S. For example, if using an A7-524-C0 in an application of 500 psig, 470°F saturated steam, and 90°F ambient temperature, Chart 1 (Carbon Steel) can be utilized by following the 90°F ambient temperature curve to 500 psig. An estimated gauge temperature of 180°F is shown. The same method will be applied for an A7-524-C0S on Chart 2 (Stainless Steel). The estimated gauge temperature will be 144°F.

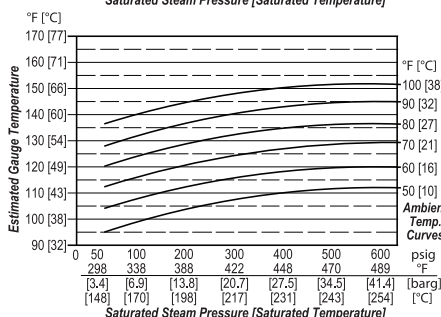
**CHART 1**

Carbon Steel



**CHART 2**

Stainless Steel



### PART NUMBER SELECTION

Gauge Siphons: Process x Instrument	
A7-524-C0	1/2" MNPT x 1/2" FNPT; CS Coupling; 316 SS Material
A7-524-C0S	1/2" MNPT x 1/2" FNPT; 316 SS Material
A7-522-C0	3/4" MNPT x 1/2" FNPT; CS Coupling; 316 SS Material
A7-522-C0S	3/4" MNPT x 1/2" FNPT; 316 SS Material
A7-507-C0	With Excess Flow Check & Swivel; 1/2" MNPT x 1/2" FNPT; 316 SS Material
A7-508-C0	3/4" MNPT x 3/4" FNPT; 316 SS Material
A7-509-C0	With Excess Flow Check; 1/2" MNPT x 1/2" FNPT; 316 SS Material
A7-530-C0	Gauge Swivel Only; 1/2" MNPT x 1/2" FNPT; 316 SS Material

### PRESSURE VS. TEMPERATURE

Part No.	Pressure @ Temperature
A7-524-C0	6,000 PSI @ 200°F Max 1,500 PSI @ 500°F Max
A7-524-C0S	6,000 PSI @ 200°F Max 1,500 PSI @ 1,000°F Max
A7-530-C0	10,000 PSI @ 200°F Max 1,500 PSI @ 1,000°F Max
A7-507-C0	1,500 PSI @ 1,000°F Max
A7-508-C0	10,000 PSI @ 200°F Max 1,500 PSI @ 500°F Max
A7-509-C0	1,500 PSI @ 1,000°F Max

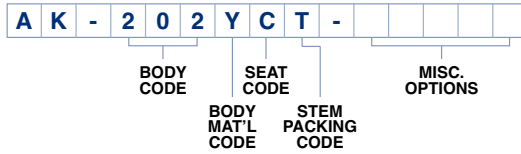
### WEIGHTS

Approx. Weights:  
 1.51 lbs. [0.68 kg] ea.  
 (A7-508 and A7-522/524-C0/C0S)  
 0.58 lbs. [0.26 kg] ea. (A7-530-C0)  
 0.60 lbs. [0.27 kg] ea. (A7-507-C0)  
 1.00 lbs. [0.45 kg] ea. (A7-509-C0)

# Welded Double Block Gauge Valves ~ Hard Seat

**ORIFICE**

**.187"**



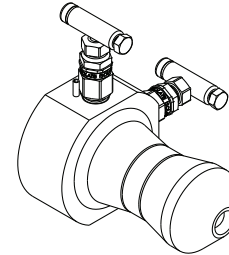
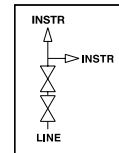
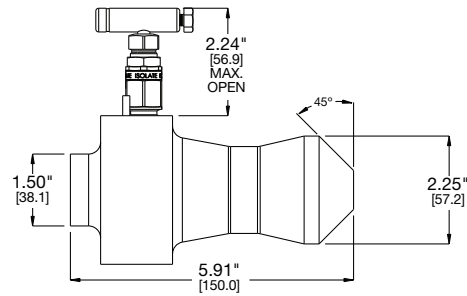
## ORDERING INFORMATION

PART NO.	CONNECTIONS		BODY & BONNET	SEAT	PACKING
	INLET	OUTLET			
<b>.187" Orifice</b>					
AK-202YCT	1/2" FNPT Standard	Carbon Steel	Carbide Ball	PTFE Pressure-Core® Stem Seal Max Pressure 10,000 PSI @ 200°F	
AK-202SCT					

OPTION CODE	DESCRIPTION
<b>Body Material Options</b>	
P	ASTM A105 CF Carbon Steel <i>For Use with Grafoil® Packed Bonnets</i>
<b>Seat Material Options</b>	
N	Monel® Ball Seat
R	Ceramic Ball Seat
6	316 SS Ball Seat
<b>Stem Packing Material Options</b>	
T	PTFE Pressure-Core® Stem Seal
G	Low-Torque™ Grafoil® Packed
J	PTFE Pressure-Core® Stem Seal (Low Temperature -50°F)
<b>Miscellaneous Options</b> <i>See Complete List on Page 24</i>	
AM7	Male Pipe Socket Weld - Male Inlet Only
S1	Monel Stem Material
W	Safety Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)

Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.

### AK-202YCT



## MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body	ASTM A350-LF2 CS	ASTM A479-316 SS
Bonnet	ASTM A479-316 SS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-3.
- 100% Pressure Tested

## MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.187"	.53
Approximate Valve Weight: 8.00 lbs [3.62 kg]	

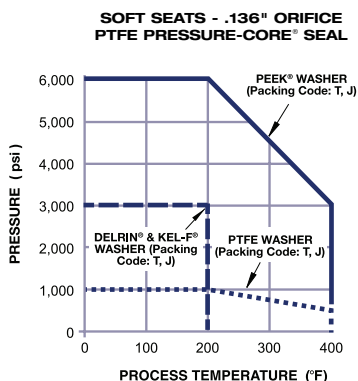
**WELDED DOUBLE BLOCK GAUGE VALVES**

# Pressure and Temperature Charts

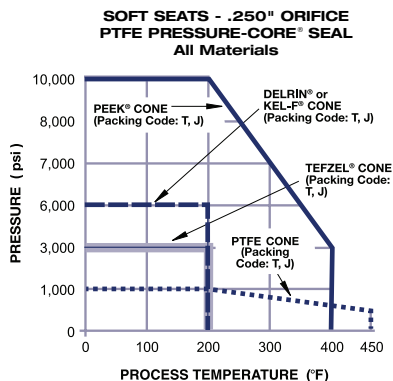
## ORIFICE

**.136" .187" .250" .375"**

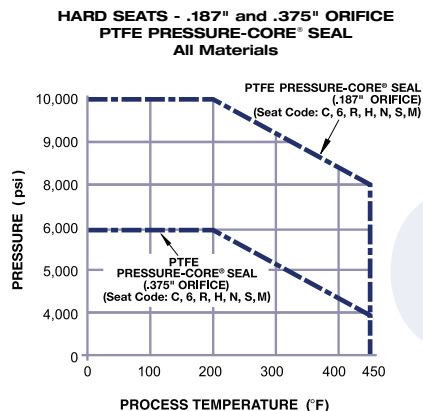
**CHART A**



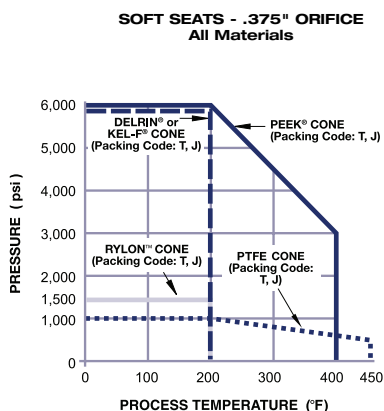
**CHART B**



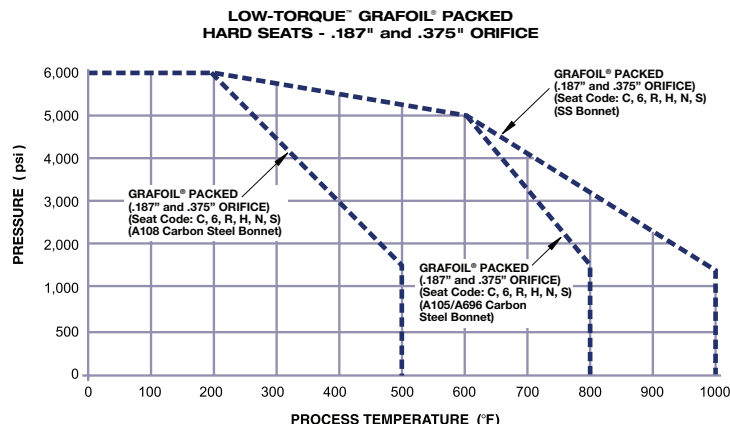
**CHART C**



**CHART D**



**CHART E**



# Pressure and Process Temperature Ratings

To determine the Pressure & Temperature rating of your product, choose your body, seat and then seal, and use the lowest maximum Pressure & Temperature rating of the 3 selected criteria.

To determine the low temperature rating, use the highest minimum rating.

STANDARD BODY MATERIAL CODES				STANDARD SOFT SEAT MATERIAL CODES				
CODE	DESCRIPTION	PRESSURE & PROCESS TEMPERATURES		CODE	DESCRIPTION	ORIFICE SIZES	PRESSURE & PROCESS TEMPERATURES	
S	ASTM A479-316 Stainless Steel	See Pressure & Temperature of Stem Seal and Seat Material		L	Rylon™ Cone Chart D	.375"	1,500 PSI Max. @ 200°F Max. to -40°F Min. 103 bar Max. @ 93°C Max. to -40°C Min.	
H	Hastelloy C-276	Minimum Temperature: -100°F (-73°C)		D & K	Delrin® and Kel-F™ Cone Charts B & D	.187", .250", .375"	6,000 PSI Max. @ 200°F Max. to -40°F Min. 414 bar Max. @ 93°C Max. to -40°C Min.	
C	ASTM A108 Carbon Steel	See Pressure & Temperature of Stem Seal and Seat Material			Delrin® and Kel-F™ Washer Chart A	.136"	3,000 PSI Max. @ 200°F Max. to -40°F Min. 207 bar Max. @ 93°C Max. to -40°C Min.	
P	ASTM A105 Carbon Steel	Minimum Temperature: -20°F (-29°C)		P	PEEK® Cone Chart B	.187", .250"	10,000 PSI Max. @ 200° to -40°F Min. 3,000 PSI Max. @ 400°F Max. 689 bar Max. @ 93° to -40°C Min. 207 bar Max. @ 204°C Max.	
STANDARD STEM SEAL MATERIAL CODES					T	PEEK® Cone Chart D	.375"	6,000 PSI Max. @ 200° to -40°F Min. 3,000 PSI Max. @ 400°F Max. 414 bar Max. @ 93° to -40°C Min. 207 bar Max. @ 204°C Max.
CODE	DESCRIPTION	ORIFICE SIZES	PRESSURE & PROCESS TEMPERATURES			PEEK® Washer Chart A	.136"	6,000 PSI Max. @ 200° to -40°F Min. 3,000 PSI Max. @ 400°F Max. 414 bar Max. @ 93° to -40°C Min. 207 bar Max. @ 204°C Max.
T	Mini PTFE Packed	.136"	6,000 PSI Max. @ 200° to -80°F Min. 4,000 PSI Max. @ 400°F Max. 414 bar Max. @ 93° to -62°C Min. 276 bar Max. @ 204°C Max.	T	PTFE Washer Chart A	.136"	1,000 PSI Max. @ 200° to -80°F Min. 500 PSI Max. @ 400°F Max. 69 bar Max. @ 93° to -62°C Min. 34 bar Max. @ 232°C Max.	
	PTFE Pressure-Core® Chart C Hard Seat Only	.187", .250"	10,000 PSI Max. @ 200° to -40°F Min. 8,000 PSI Max. @ 450°F Max. 689 bar Max. @ 93° to -40°C Min. 552 bar Max. @ 232°C Max.		Z	PTFE Cone Charts B & D	.187", .250", .375"	1,000 PSI Max. @ 200° to -80°F Min. 500 PSI Max. @ 450°F Max. 69 bar Max. @ 93° to -62°C Min. 34 bar Max. @ 232°C Max.
J		PTFE Pressure-Core® Low Temperature Chart C Hard Seat Only	.187", .250"	10,000 PSI Max. @ 200° to -50°F Min. 8,000 PSI Max. @ 450°F Max. 689 bar Max. @ 93° to -46°C Min. 552 bar Max. @ 232°C Max.		STANDARD HARD SEAT MATERIAL CODES		
	.375"		6,000 PSI Max. @ 200° to -50°F Min. 4,000 PSI Max. @ 450°F Max. 414 bar Max. @ 93° to -46°C Min. 276 bar Max. @ 232°C Max.	CODE	DESCRIPTION	ORIFICE SIZES	PRESSURE & PROCESS TEMPERATURES	
P	PTFE Packed Style	.187"	10,000 PSI Max. @ 200° to -80°F Min. 4,000 PSI Max. @ 500°F Max. 689 bar Max. @ 93° to -62°C Min. 276 bar Max. @ 260°C Max.	C	Carbide Ball	.136", .187", .375" Charts C & E	See Pressure & Temperature of Body and Stem Seal Material	
				G	Low-Torque™ Grafoil® Packed Style Chart E Hard Seat Only			.187", .375"
A108 Carbon Steel Bonnet 6,000 PSI Max. @ 200° to -20°F Min. 1,500 PSI Max. @ 500°F Max. 414 bar Max. @ 93° to -29°C Min. 103 bar Max. @ 260°C Max.	6	316 SS Ball						
SS Bonnet 6,000 PSI Max. @ 200° to -100°F Min. 1,500 PSI Max. @ 1,000°F Max. 414 bar Max. @ 93° to -73°C Min. 103 bar Max. @ 538°C Max.	N	Monel Ball						
M	Integral Metal to Metal Seat	.187"		H	Hastelloy-C Ball			
				S	Stellite Ball			

## NOTES

- Monel® is a registered trademark of International Nickel Company.
- Hastelloy® is a registered trademark of Haynes International.
- Delrin® and Tefzel® are registered trademarks of the E.I. duPont de Nemours Company.
- Grafoil® is a registered trademark of Union Carbide Corporation.
- PEEK® is a registered trademark of ICI Americas, Inc.
- Kel-F™ is a registered trademark of the 3M Company.
- Rosemount® is a registered trademark of Rosemount®, Inc.

PRESSURE AND PROCESS TEMPERATURE

## Miscellaneous Options *Add Options in Alpha-Numeric Order.*

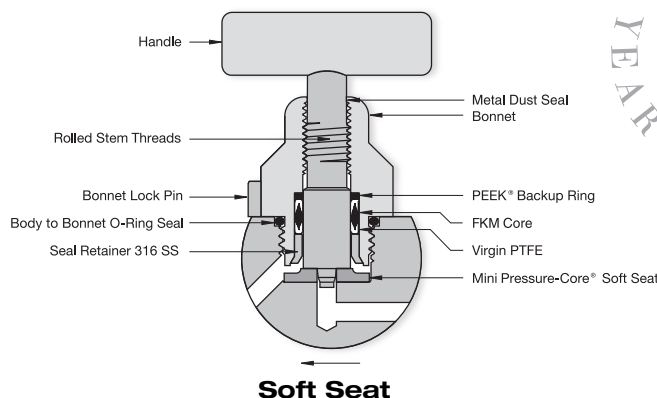
OPTIONS			
OPTION CODE	DESCRIPTION	OPTION CODE	DESCRIPTION
AB	1/2" Integral Tube Fitting - Parker A-Lok Welded in Compression Fitting	GJ	Bonnet Lock Out (All Positions - Lock Not Provided)
AM7	1/2" Male Pipe Socket Weld - Inlet Only (Process Ports)	GK	Bonnet Lock Out (Isolation Valve Only - Lock Not Provided)
AP	1/2" Female Pipe Socket Weld Inlet & Outlet	GL	Bonnet Lock Out (Equalizer or Secondary Block Valve Only - Lock Not Provided)
AP7	1/2" Female Pipe Socket Weld Inlet Only (Process Ports)	GM	Bonnet Lock Out (Vent Valve Only - Lock Not Provided)
AP8	1/2" Female Pipe Socket Weld Outlet Only	HA	Extruded Aluminum Round Handle ("T" / Bar Handle Std.)
AS	6" Tube Stub Inlet & Outlet	H5	CS Mini Round Handles
AS7	6" Tube Stub Inlet Only	H6	SS Mini Round Handles
AU	Integral Parker A-Lok Inlet & Outlet	H7	CS Mini "T" / Bar Handle
AU7	1/2" Integral Tube Fitting - Parker A-Lok Dual Ferrules Inlet Only (Process Ports)	H8	SS Mini "T" / Bar Handle
AY	Integral Parker CPI Inlet & Outlet	M1	Panel Mount Nut
AY7	Integral Parker CPI Inlet Only	S1	Monel Stem Material
B1	Bleed Valve Installed Ball Seat A7-521 (1/4") or A7-520 (1/2")	TH	Hydrostatic Testing
B2	Bleed Valve Installed Bleed Tee Style A7-528 (1/4") or A7-529 (1/2")	VC	CS Versa Mount Bracket
B3XX	Mini Bleed Valve Installed V-585 Style XX = Seat and Seal Code On V-585	VCH	CS Heavy Duty Versa Mount Bracket
B4	Bleed Valve Installed Mini Hex Style A7-525 (1/4") or A7-526 (1/2")	VS	316 SS Versa Mount Bracket
B5	Bleeder Valve 1/4" NPT Installed in Vent Port (BV10N2)	VSH	316 SS Heavy Duty Versa Mount Bracket
B6	Bleeder Valve 1/4" NPT Installed in Vent Port (BV10N4)	W	Safety Bonnet Lock Plate
GA	Anti-Tamper Bonnet (All Positions)	W1	316 SS Tag (20 Characters)
GC	Anti-Tamper Bonnet (Isolation Valve Only)	WK	Paper Tag
GD	Anti-Tamper Bonnet (Equalizer Valve Only)	XL	Clean for Critical Service (Oxygen or Chlorine)
GE	Anti-Tamper Bonnet (Vent Valve Only)	XS	Special Stamping
		XV	Manifold Mounted to Customers Transmitter and Pressure Tested
		Y	OS & Y Bonnet

## PTFE Mini Pressure-Core® Stem Seal Bonnet and Packing Design

**ORIFICE**
**.136"**

### VP Series Mini / Cylinder Valves

**PATENTED**  
**5**  
**YEAR WARRANTY**



### Mini PTFE Pressure-Core® vs. Conventional "Packed" PTFE

Conventional mini packed bonnet designs are prone to stem leaks due to PTFE seal extrusion. The packing is located above the stem threads, thus allowing the possibility of critical stem thread contamination by the process. Additionally, the soft seat area is so small that technicians can easily force the stem through the seat washer as they try to get a "firm feel" on the shut-off. Over the long run, stem and seat leaks will cause calibration and recording difficulties, as well as loss of sample product.

#### Mini Pressure-Core® Advantages:

- **Highly Reliable** Patented Pressure-Core® Stem Seal with 5 Year Warranty
- Seal **Below** the Stem Threads
- Soft Seat Washer with **FOUR TIMES** the Sealing Area of a Standard Mini Seat that Provides a Seat that Can't Be Damaged with Excessive Shutoff Force
- **Same Cv Rating** (.22 Max) as the Conventional Mini Bonnet

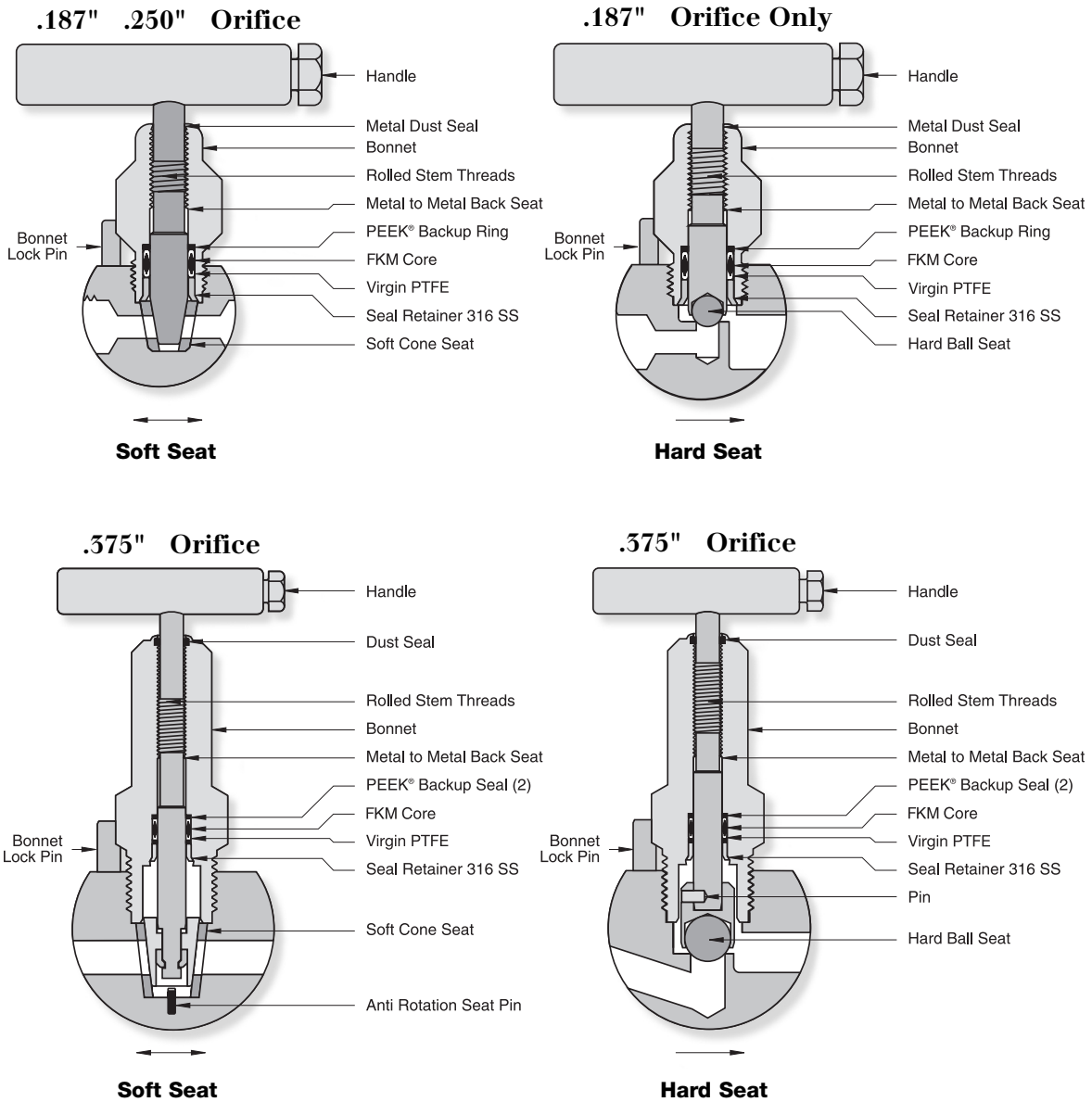
# PTFE Pressure-Core® Stem Seal Bonnet and Packing Design

**ORIFICE**

**.187" .250" .375"**



CODE "T"

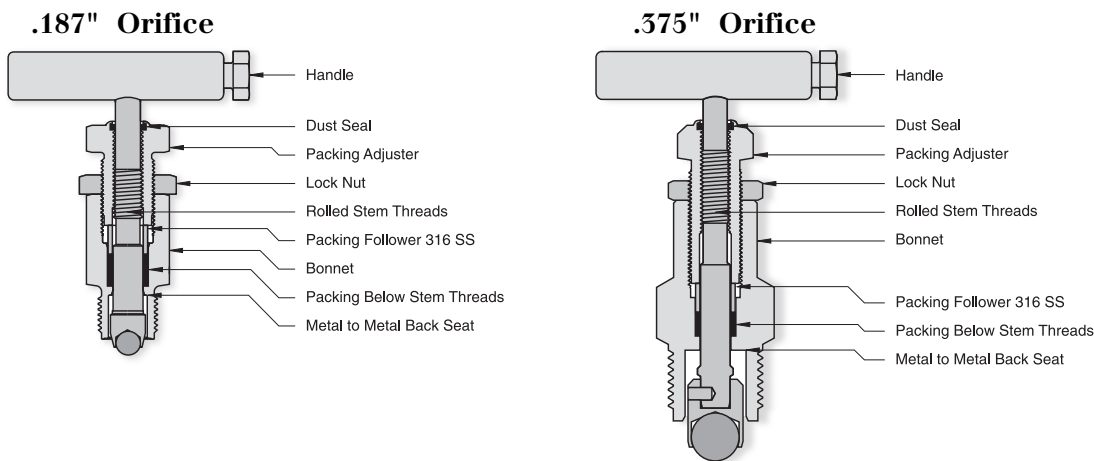


# Low-Torque™ Grafoil® Bonnet and Packing Design

## ORIFICE

**.187" .375"**

### Packed Valves Low-Torque™ Grafoil® Code "G"

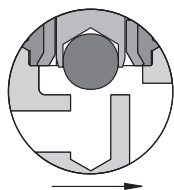


## Seat Designs ~ Features and Benefits

### ORIFICE

**.136" .187" .250" .375"**

#### HARD BALL SEAT ~ .187" .375" Orifice



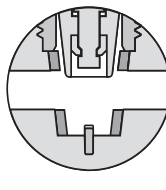
##### FEATURES

- PGI Standard Carbide *Ball* Seat

##### BENEFITS

- Non-rotating ball eliminates seat galling and ball creasing
- Leak free, bubble tight seating
- Available in a variety of materials

#### 316 SS CONE SEAT ~ .375" Orifice



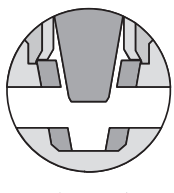
##### FEATURES

- PGI 316 SS *Cone* Seat

##### BENEFITS

- Non-rotating stem tip
- Roddable straight-through design
- Easily replaced
- Bi-directional flow

#### SOFT SEAT ~ .187" .250" .375" Orifice



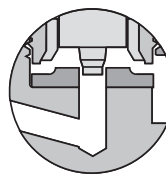
##### FEATURES

- PGI Soft *Cone* Seat

##### BENEFITS

- Roddable straight-through design
- Leak free, bubble tight seating
- Easily replaced
- Available in a variety of materials
- Bi-directional flow

#### SOFT "WASHER" SEAT ~ .136" Orifice [Mini Pressure-Core] [VP Series Mini / Cylinder Valves]



##### FEATURES

- PGI Standard Delrin® Seat

##### BENEFITS

- Compatible with H<sub>2</sub>S/CO<sub>2</sub>
- Throttling and shut-off design
- Available in a variety of materials

## Additional PGI Product Offerings

### PGI Instrument Manifolds

A complete line of Block & Bleed, Meter, Two, Three and Five Valve styles available in Carbon Steel and 316 SS to NACE MR-01-75/ISO 15156-3. Specialty alloys available. Offered with the patented PTFE Pressure-Core® Stem Seal with an unmatched 5 year warranty.

### Lone Star™ Instrument Valves & Manifolds

PGI also offers a complete line of instrument valve and manifold products with the traditional 1 year warranty. This value line of products is available in adjustable packed bonnet designs and FKM O-Ring seal bonnets for customers requiring a quality product at a value price. The Lone Star line offers a complete array of seat material options. A wide variety of ball seat materials, metal to metal seats and soft seats are available in a variety of materials to fit your application. Lone Star is also available in NACE MR0175/ISO 15156-3 for your critical services.

### PGI Power & Steam Instrument Valves & Manifolds

A complete line of Hand, Gauge, Root, Multi-Port, and Blowdown Valves. Two, Three and Five Valve manifolds for power and steam plant applications. All of the PGI power products are rated for ANSI B51.1.

### Direct-Mount® Systems

PGI, as the industry leader of close coupled manifolding, offers systems to meet today's strict measurement requirements that reduce or eliminate gauge line errors (GLE). Offered with our patented PTFE Pressure-Core® Stem Seal with an unmatched 5 year warranty.

### Engineered Products Division

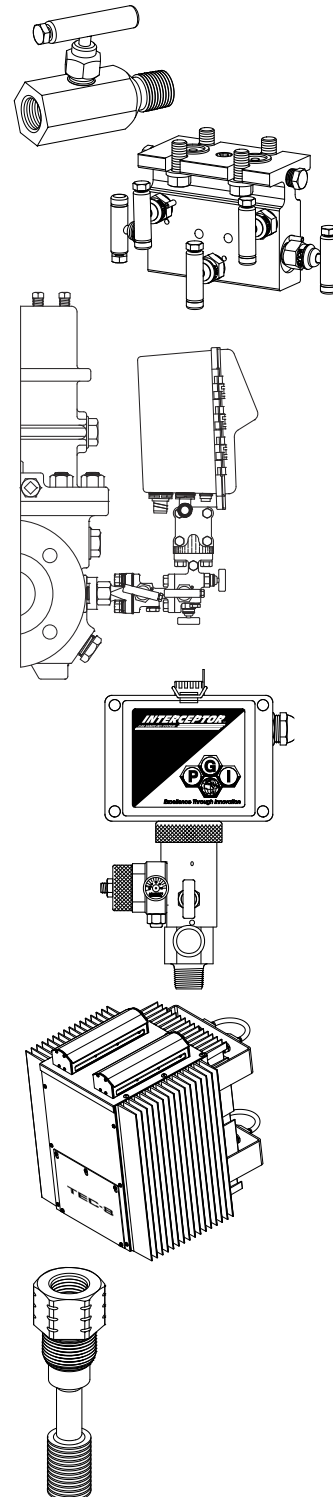
PGI offers a complete line of Gas and Liquid Composite Samplers. The Interceptor and Nova samplers are FM and CSA Approved, Intrinsically safe for Class I, Division 1, Group C and D hazardous locations, when used with an Approved PGI furnished power supply. Our NOVA system samples refined liquids, dense phase CO<sub>2</sub> and wet, dry or dirty gas. Engineered Products division also offers sample cylinders, sample probes and cylinder valves. Our Hot-Shot™ Heated Enclosure System is designed to be used with natural gas samplers and will heat the sampling system to temperatures above the hydrocarbon dew point of the gas, assisting in the compliance of the new API Standard 14.1.

### ZEUS® Power Systems

We offer efficient and reliable alternatives to solar panel systems used to power electronic instruments on gas pipelines. PGI's ThermoElectric Chargers (TEC) and Differential Pressure Chargers (DB1) both produce 12- or 24- volts of power to keep batteries fully charged. TEC is fueled by natural gas or propane, while the DB1 is powered using the differential pressure developed across a pressure regulator. Both TEC and DB1 continually monitor the battery's temperature and charge level, and charge the battery accordingly. TEC and DB1 can be used on transmitters, flow computers, AFR (Air Fuel Ratio) and communication systems on gas pipelines. The compact units excel in cold, snowy or rainy conditions, and are low-emission environmentally friendly.

### ThermoSync® Temperature Measurement Systems

PGI's ThermoSync thermowell and RTD probe provide the most accurate pipeline gas temperature measurement system available. The unique patented design optimizes thermo-coupling at the RTD tip while minimizing pipe wall induced errors. Reducing pipe temperature effects on flow calculations provides greater accuracy and minimizes unaccountable errors. The ThermoSync Temperature system measures the true flowing gas temperature by including a finned thermowell with a RTD that has PVC insulation, thus reducing the transfer of outside temperature effects to the RTD.



ADDITIONAL PGI PRODUCT OFFERINGS

#### **INSTRUMENTATION PRODUCTS**

Instrument Valves & Manifolds  
Power and Steam Plant Valves & Manifolds  
Purge Adapters for the Process Industry

#### **SPECIALIZED SYSTEMS**

Gas & Liquid Sampling Systems  
Natural Gas Sampling System Heated Enclosures  
Sample Cylinders and Accessories

#### **MEASUREMENT ACCURACY PRODUCTS**

ThermoSync<sup>®</sup> Thermowells & Temperature Probes  
Direct-Mount<sup>®</sup> Systems  
Square Root Error (SRE) & Gauge Line Error (GLE) Indicators

#### **ZEUS<sup>®</sup> POWER SYSTEMS**

TEC<sup>™</sup> ThermoElectric Battery Chargers  
DB1<sup>™</sup> Differential Pressure Battery Chargers

#### **ADDITIONAL PGI DIVISION PRODUCTS & SERVICES**

Valve Fittings & Wellhead Components  
Propane and Anhydrous Ammonia Valves  
Contract Machining



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